

SUMMARY

The California Department of Transportation (Caltrans), in cooperation with the Contra Costa Transportation Authority (CCTA) and the City of Concord (Concord), proposes interchange and local road improvements along State Route (SR) 242 from 0.1 mile north of the Interstate 680 (I-680) / SR 242 separation to 0.6 mile north of Concord Avenue undercrossing, in Concord, in Contra Costa County. The purpose of the SR 242/Clayton Road Ramps Project (project) is to reduce congestion and improve traffic operations at the SR 242/Clayton Road and SR 242/Concord Avenue interchanges, thereby enhancing mobility in the area, and improving accessibility to key local destinations including the Concord Central Business District and the Concord BART station.

Two design alternatives were developed to meet the project purpose and need, while avoiding or minimizing environmental impacts. The alternatives are “Build Alternative 1”, “Build Alternative 2”, and the “No-Build Alternative”. Differences between Build Alternatives 1 and 2 are generally related to the alignment of the new ramp structures and related components (i.e., ramp termini intersection improvements, retaining walls, and right-of-way acquisition).

Under the No-Build Alternative, none of the improvements proposed under the project would occur. Other planned and approved land use development and transportation improvements along local routes may be implemented by local agencies or under other projects. The No-Build Alternative is considered the environmental baseline against which potential environmental effects of the Build Alternatives are evaluated.

Table S-1 summarizes the adverse effects of the Build Alternatives and the No-Build Alternative. The proposed avoidance and minimization measures to reduce the effects of the Build Alternatives are also presented. Where appropriate, the environmental consequences and avoidance and minimization measures specific to Build Alternative 2 are identified. For a complete description of potential adverse effects and recommended measures, please refer to the specific sections within **Chapter 2.0 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures**.

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 USC 327, for more than five years, beginning July 1, 2007 and ending September 30, 2012. The Moving Ahead for Progress in the 21st Century Act (MAP-21) (P.L. 112-141), signed by President Obama on July 6th, 2012, amended 23 USC 327 to establish a revised and permanent Surface Transportation Project Delivery Program. As a result, Caltrans entered into a memorandum of understanding pursuant to 23 USC 327 (NEPA Assignment MOU) with the Federal Highway Administration (FHWA).

The NEPA Assignment MOU became effective October 1, 2012 and terminates eighteen months from the effective date of FHWA regulations developed to clarify amendments to 23 USC 327 or on January 1, 2017. The NEPA Assignment MOU incorporates by reference the terms and conditions of the Pilot Program MOU. In summary, Caltrans continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, FHWA assigned and Caltrans assumed all of the United States Department of Transportation (USDOT) Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to Caltrans under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions. Refer to the Standard Environmental Reference (SER), Vol. 1, Chapter 38, "NEPA Assignment" for detailed guidance on the policy and procedures for compliance with NEPA and other federal environmental laws, regulations, and executive orders for projects assigned to Caltrans.

Caltrans is the lead agency for this project under California Environmental Quality Act (CEQA).

Table S-1 Project Effects

Affected Resource	Potential Effect			Avoidance and Minimization Measures
	No-Build Alternative	Build Alternative 1	Build Alternative 2	
Parks and Recreation Facilities (2.1.1)	None	Temporary closure of the pedestrian undercrossing (PUC)/detour access to the Monument Corridor Trail.	Same as Build Alternative 1	<p>Measure COM-1: A Transportation Management Plan (TMP) will be developed during the final design phase and incorporated into the construction of the project to minimize impacts to motor vehicles, emergency vehicles, bicycles, and pedestrians during construction. The major objectives of the TMP are to maintain efficient and safe movement of vehicles, emergency vehicles, bicyclists, and pedestrians through a construction zone, and to provide public awareness of potential impacts on SR 242 and adjacent local streets. The TMP may include briefing local public officials and developing a public information program to notify the public regarding upcoming closures and detours (i.e., construction signs, portable changeable message signs, press releases and other documents). The public information program would include outreach to adjacent businesses, ridesharing agencies; transit operators; and neighborhood and special interest groups.</p> <p>As part of the TMP, detour signage would be posted at the Iron Horse Trail and Monument Corridor Trail access points (including the SR 242 pedestrian undercrossing) to direct pedestrians and bicyclists to alternative routes during temporary closures of the pedestrian undercrossing.</p>
Relocations and Real Property Acquisition (2.1.2)	None	Four relocations; permanent acquisitions from 5 parcels	No relocations; permanent acquisitions from 2 parcels	<p>Measure COM -1</p> <p>Measure COM-2 (Build Alternative 1 Only): As a part of the final design phase, Caltrans will comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act to any commercial businesses displaced as a result of the project. Relocation efforts may include provision of current lists of properties offered for sale or rent, suitable for a particular business's specific relocation needs. The types of payments available may include: searching and moving expenses, and possibly reestablishment expenses; or a fixed in lieu payment instead of any moving, searching and reestablishment expenses.</p>

Affected Resource	Potential Effect			Avoidance and Minimization Measures
	No-Build Alternative	Build Alternative 1	Build Alternative 2	
Environmental Justice (2.1.2)	None	Project effects, such as increases in noise levels and temporary construction impacts (e.g., dust and noise impacts), would be borne by both environmental justice communities and non-environmental justice communities. Although environmental justice communities exist near the project limits, they would not be subject to an adverse impact greater than experienced by the non-environmental justice communities.	Same as Build Alternative 1	None

Affected Resource	Potential Effect			Avoidance and Minimization Measures
	No-Build Alternative	Build Alternative 1	Build Alternative 2	
Utilities (2.1.3)	None	Relocation of existing electric transmission lines.	Relocation of Kinder Morgan oil pipeline.	<p>Measure UTL-1: Detailed utility coordination and verification will be required during the final design phase of the project. The locations of the utilities will not be positively identified until final design, and in coordination with the affected utility owners. Any potential utility conflicts identified during the design phase will be avoided if possible. If relocation is necessary, such utilities would be relocated to locations not in conflict and not containing any sensitive environmental resources. Coordination with all utility owners within the footprint of the project will continue during the design and construction phases of the project.</p> <p>Measure UTL-2: Emergency Services will be notified prior to construction, of any temporary road closures and/or detours as part of the TMP. Implementation of the TMP would reduce short-term operational effects to police, fire, and emergency service providers that may result from construction of the project.</p>
Emergency Services (2.1.3)	None	Short-term effects to police, fire, and emergency service access during construction.	Same as Build Alternative 1	Measure COM - 1
Traffic and Transportation/Pedestrian and Bicycle Facilities (2.1.4)	The Concord Avenue/Commerce Avenue/SR 242 southbound ramps intersection would be unable to accommodate	Clayton Rd/SR 242 new ramps would shift traffic away from the Concord Ave/Commerce Ave/ SR 242 southbound ramps intersection, reducing vehicle queue length and delay. All	Same as Build Alternative 1, but would worsen local roadway operations and delay at the Clayton Rd/Market St/SR 242 ramps and Willow Pass Rd/Market St intersections.	Measure COM - 1

Affected Resource	Potential Effect			Avoidance and Minimization Measures
	No-Build Alternative	Build Alternative 1	Build Alternative 2	
	increased traffic volumes by 2040. Congestion at this intersection would translate into operational deficiencies such as long vehicle queue lengths along the SR 242 southbound off-ramp, vehicle spillback onto the SR 242 mainline, and vehicle delay. Intersections at Clayton Road/Market Street/SR 242 ramps would degrade to Level of	study intersections are expected to operate at LOS D.		

Affected Resource	Potential Effect			Avoidance and Minimization Measures
	No-Build Alternative	Build Alternative 1	Build Alternative 2	
	Service (LOS) E. LOS is a qualitative measure of traffic operating conditions.			
Visual/Aesthetics (2.1.5)	None	<p>Build Alternative 1 would include roadway widening, new overhead ramp structures, retaining walls, building removal, and vegetation removal.</p> <p>Approximately 299 landscape trees and other planting would be removed from the interchange areas and along the freeway.</p> <p>Overall, the magnitude of change would be notable, but would not substantially alter scenic vistas, scenic resources, or</p>	<p>Build Alternative 2 would include roadway widening, new overhead ramp structures, retaining walls, building removal, and vegetation removal.</p> <p>Approximately 271 landscape trees and other planting would be removed from the interchange areas and along the freeway.</p> <p>The overall visual impact under Build Alternative 2 would be moderate-low.</p>	<p>Measure VIS-1: Existing landscaping and other roadside vegetation removed by the project will be replaced where proper setbacks exist and where feasible per Caltrans policy. Replacement planting would be accomplished as a separate contract, funded from the parent roadway contract, and would include a three-year plant establishment period. Landscape plans shall be developed during the final design phase and be approved by Caltrans. The quantity of roadside vegetation that would ultimately be removed by the project will be determined during final design and serve as the basis for determining the amount of replacement planting to be provided by the project.</p> <p>Measure VIS-2: Because this segment of SR 242 is a Classified Landscaped Freeway, all replacement planting must be planted such that the criteria for the Landscaped Freeway will be maintained. In these areas, planting must be continuous (no gaps ≥ 200 feet), ornamental (not functional), at least 1,000 feet long, on at least one side of the freeway, and require reasonable maintenance. In order to maintain classification as a Landscape Freeway, any removed highway plantings would be replaced within two years after the project is constructed.</p> <p>Measure VIS-3: Vacant areas under new ramp bridges and adjacent freeway bridges will be fenced off, where feasible. Other measures such as brush removal and placement of larger landscaping space-fillers, such as boulders, may also be considered in the final design.</p> <p>Measure VIS-4: To reduce the visual impact of new retaining walls, aesthetic treatments consisting of color, texture and/or patterning will be applied to reduce visual impacts. The aesthetic treatment shall be context sensitive to the location and be compatible with existing walls in the project</p>

Affected Resource	Potential Effect			Avoidance and Minimization Measures
	No-Build Alternative	Build Alternative 1	Build Alternative 2	
		<p>degrade the existing character and quality of the project area.</p> <p>The backdrop of the existing visual setting would continue to be the existing elevated SR 242 freeway that expresses low visual unity.</p> <p>The overall visual impact under Build Alternative 1 would be moderate-low.</p>		<p>area. If concrete drainage ditches are required along the top of and behind the retaining walls, the ditch should be stained to match the overall color of the wall. Aesthetic treatments will also reduce glare and deter graffiti, and shall be developed during the final design phases and be approved by Caltrans.</p> <p>Measure VIS-5: Where required, retaining wall cable safety railing should have black or brown vinyl cladding to make them less visually obtrusive and help them blend with the setting.</p> <p>Measure VIS-6: Concrete safety-shaped barriers should be sand blasted to a medium finish to minimize glare and deter graffiti. Barriers at the bottom of retaining walls should be stained to match the overall wall color if deemed appropriate by the Office of Landscape Architecture during the design phase.</p> <p>Measure VIS-7: As directed by Caltrans, appropriate light and glare screening measures will be used at the construction staging areas including the use of downward cast lighting.</p>
Cultural Resources (2.1.6)	None	No known cultural resources are within the project's area of potential effect.	Same as Build Alternative 1	<p>Measure CUL-1: If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the NAHC who will then notify the MLD. At this time, the person who discovered the remains will contact Caltrans Professionally Qualified Staff (PQS) Archaeologist so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.</p> <p>Measure CUL-2: If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area</p>

Affected Resource	Potential Effect			Avoidance and Minimization Measures
	No-Build Alternative	Build Alternative 1	Build Alternative 2	
				will be diverted until a qualified archaeologist can assess the nature and significance of the find. Additional study or survey will be needed if the project design changes or project limits are extended beyond the present survey limits.
Hydrology and Floodplain (2.2.1)	None	As the proposed improvements would generally maintain the existing roadway profile of SR 242, the project's effects to floodplains would be negligible with regard to storm water runoff and changes in the 100-year water surface elevations. The project would not encourage floodplain development in the surrounding areas. Therefore, no significant floodplain encroachment would occur.	Same as Build Alternative 1	None

Affected Resource	Potential Effect			Avoidance and Minimization Measures
	No-Build Alternative	Build Alternative 1	Build Alternative 2	
Water Quality and Storm Water Runoff (2.2.2)	None	<p>Existing drainage systems at the edge of shoulders or on local streets may need to be relocated. New drainage systems may be required to capture storm water flow from Build Alternative 1.</p> <p>The additional impervious / reworked area (e.g. roadways) created by Build Alternative 1 (7.29 acres) would allow for an increased area for deposition of sediment and other pollutants from vehicular traffic.</p> <p>During construction,</p>	<p>Existing drainage: Same as Build Alternative 1</p> <p>Impervious / reworked area: Build Alternative 2 would result in 7.20 acres of additional / reworked areas</p>	<p>Measure WQ-1: Temporary Construction BMPs Pursuant to the Construction General Permit, a SWPPP would be developed for the project and would comply with the Caltrans SWMP, which includes guidance for Design staff to incorporate special provisions into construction contracts to include measures to protect sensitive areas and to prevent and minimize storm water and non-storm water discharges. The SWPPP would reference the Caltrans Construction Site BMPs Manual. This manual is comprehensive and includes many other protective measures and guidance to prevent and minimize pollutant discharges. Further evaluation of the BMPs necessary for the project to comply with the permits and other regulatory agency requirements would be detailed prior to construction.</p> <p>Per standard practices, and to be identified in the project's contract specifications, dewatered water would be discharged into Pine Creek after utilizing a temporary active treatment system and testing to ensure compliance with the applicable water quality standards.</p> <p>Measure WQ-2: Design Pollution Prevention BMPs The drainage and landscape elements listed below can be utilized as design pollution prevention BMPs for the project, as specified by the Design Engineer. The following elements would be considered during the final design phase:</p> <ul style="list-style-type: none"> ▪ Consideration of downstream effects related to potentially increased flow: Necessary erosion control would be applied to unlined ditches to minimize erosion downstream from potentially increased discharge. ▪ Preservation of existing vegetation: Preserving existing vegetation is beneficial. Avoid any disturbance beyond what will be necessary to widen the existing transportation facilities. ▪ Concentrated flow conveyance systems: If necessary, flow attenuating devices would be implemented (e.g., flared-end-section, outlet protection/velocity dissipation devices). ▪ Slope/Surface Protection Systems: Necessary erosion control features would be incorporated for work along steep grades. When practicable, slope stability and erosion concerns would be reduced by maintaining or matching existing slopes.

Affected Resource	Potential Effect			Avoidance and Minimization Measures
	No-Build Alternative	Build Alternative 1	Build Alternative 2	
		Build Alternative 1 would have the potential for temporary water quality impacts due to grading and excavation activities, which could cause increased erosion. Storm water runoff from within the project limits may transport pollutants to nearby receiving waters and storm drains if protective measures are not properly implemented.		<ul style="list-style-type: none"> Hydromodification: In order to manage hydromodification, volume-reduction elements may be proposed during the design phase to match, or closely match, the pre- and post-construction hydrographs. Measures to address hydromodification impacts can include structural measures, such as underground detention, and non-structural measures, through the modification of proposed treatment BMPs (see Measure WQ-3). The proposed measures must be designed to show that storm water runoff discharge rates and durations match the pre-project conditions within a certain percentage of the peak flow rates during storm events. <p>The Pine Creek crossing along the project limits was determined to have a “low risk” for hydromodification. Measures to address hydromodification should be considered at all the receiving waters. If hydromodification measures are difficult to implement, then an exemption may be granted, at the discretion of the RWQCB. A complete hydromodification susceptibility assessment and negotiation with the RWQCB will be conducted during the final design phase.</p> <p>Measure WQ-3: Treatment BMPs Typical permanent treatment BMPs may include infiltration devices, such as vegetated basins and/or swales along the roadways that collect storm water runoff. The basins allow pollutants to settle and filter out prior to the storm water entering the drainage systems. Caltrans has an approved list of treatment BMPs that have been studied and verified to remove targeted design constituents and provide general pollutant removal. In addition, the San Francisco Bay RWQCB suggests the use of both infiltration and retention devices for pollutant removal or reduction while promoting the effort to mimic predevelopment hydrology by reducing flow rates and velocity and allowing for groundwater recharge. Although retention devices are not currently approved Caltrans BMP devices, the feasibility and determination of preferred treatment BMP type would be coordinated during the final design phase to ensure both Caltrans and regional requirements are met.</p>

Affected Resource	Potential Effect			Avoidance and Minimization Measures
	No-Build Alternative	Build Alternative 1	Build Alternative 2	
Geology/ Soils/ Seismic/ Topography (2.2.3)	The No-Build Alternative would be subject to the same geologic, soils, and seismic hazards as the Build Alternatives.	<p>The project area could be exposed to strong earthquake shaking. Liquefaction could affect untreated soil at foundations for ramp structures and retaining walls.</p> <p>Construction workers could be exposed to potential seismic hazards during construction.</p>	Same as Build Alternative 1	<p>Measure GEO-1: As part of the final design phase, Caltrans requires preparation of the structure foundation reports and geotechnical design reports that incorporate the results of subsurface field work and laboratory testing. Site specific subsurface soil conditions, slope stabilities, and groundwater conditions within the project limits would be verified during the preparation of these reports. The identification of the site specific soil conditions within the project limits would be used to determine the appropriate final design for the foundations that would support the project's structures. If corrosive soils are identified at locations where new subsurface facilities are proposed (e.g. bridge foundations, culverts, etc.) specially coated rebar, or alternative pipe culverts would be specified in the contract documents.</p> <p>Caltrans' standard design and construction guidelines incorporate engineering standards that address seismic risks. Proposed structures, such as retaining walls and overhead ramp supports, constructed within the geologic study area, would consider seismically-induced liquefaction and settlement during the final design phase.</p> <p>The final design phase would also include the evaluation of the Design Response Spectrum, which measures the ground motion or acceleration caused by the input of a vibration from an earthquake at a specific location and can help in understanding how structures would respond to earthquakes in a given place.</p> <p>Measure GEO-2: With respect to worker safety during construction, OSHA requires employers to comply with hazard-specific safety and health standards. Pursuant to Section 5(a) (1) of OSHA, employers must provide their employees with a workplace free from recognized hazards likely to cause death or serious physical harm. Potential seismic-related hazards to workers during construction are expected to be less than substantial with compliance with the OSHA and Caltrans standard design and construction guidelines.</p>
Paleontology (2.2.4)	None	Deeper excavations associated with	Same as Build Alternative 1	Measure PAL-1: Monitoring and Mitigation Program. Prior to construction, a qualified professional paleontologist (as defined by Caltrans) should be retained to both design a monitoring and mitigation

Affected Resource	Potential Effect			Avoidance and Minimization Measures
	No-Build Alternative	Build Alternative 1	Build Alternative 2	
		Build Alternative 1 could encounter Pleistocene sediments with a high potential to yield paleontological resources.		<p>program, and implement the program during project-related excavation and earth disturbance activities. The paleontological resource monitoring and mitigation program would include:</p> <ul style="list-style-type: none"> ▪ preconstruction coordination ▪ construction monitoring ▪ emergency discovery procedures ▪ sampling and data recovery, if needed ▪ preparation, identification, and analysis of the significance of fossil specimens salvaged, if any ▪ museum storage of any specimens and data recovered ▪ reporting <p>Prior to the start of construction, the paleontologist would conduct a field survey of exposures of sensitive stratigraphic units within the construction footprint that will be disturbed. The Monitoring and Mitigation Program will identify the excavations for project improvements that would be deep enough to impact high potential Pleistocene sediments. These areas would be monitored and inspected for the presence of potentially fossiliferous sediments. Monitoring would not need to be conducted in sediments that have been previously disturbed or in areas where exposed sediments would be buried, but not otherwise disturbed.</p> <p>Prior to the start of construction, a worker training would be prepared and presented by a qualified professional paleontologist. Personnel involved with earth-moving activities would be trained to recognize the appearance of common fossils and would receive guidance on proper notification procedures if such protected resources were discovered.</p>
Hazardous Waste/ Materials (2.2.5)	None	Several potential hazardous materials sites are located in close proximity to where project elements would be constructed.	Same as Build Alternative 1. Deviations in the alignments of the proposed improvements under the Build Alternative 2 is	Measure HAZ-1: During the final design phase of the project, a Preliminary Site Investigation (PSI) shall be performed to investigate hazardous materials concerns related to soil, groundwater, and construction materials within the project limits, as identified in the ISA. A work plan for the PSI shall be submitted to Caltrans for review and approval. Additional investigation may be required to fully evaluate hazardous materials issues if concerns are identified during the PSI. All environmental investigations for the project would be provided to project

Affected Resource	Potential Effect			Avoidance and Minimization Measures
	No-Build Alternative	Build Alternative 1	Build Alternative 2	
		<p>The risk of encountering contaminated groundwater from these sites during project construction is medium to high, depending on the depth of excavation or disturbance.</p> <p>Soils adjacent to the project corridor may contain naturally occurring asbestos or pesticides from previous agricultural land uses. Vehicle tire and brake wear, oil, grease, and exhaust from vehicular traffic on SR 242 and other roads within the project area may have contaminated surface soils in the immediate vicinity with aerially deposited lead</p>	<p>not substantial enough to result in different risk levels related to the known hazardous release sites.</p>	<p>contractors, so the findings may be incorporated into their Health and Safety and Hazard Communication Programs.</p> <p>As part of the PSI, representative soil and groundwater sampling shall be conducted by a licensed professional to evaluate the potential presence of hazardous materials in soil and groundwater within the project limits prior to construction and earthwork activities. The sampling shall be performed in accordance with a work plan that has been reviewed and approved by Caltrans, and would address the areas of concern. Soil samples collected to evaluate ADL shall be analyzed for total lead and soluble lead to evaluate whether the Department of Toxic Substances Control's variance issued to Caltrans could apply. If applicable, the variance would determine whether the lead-affected soils could be reused as fill within the project area. Soil and groundwater analytical results shall also be screened against the San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels to determine appropriate actions that would ensure the protection of construction workers, future site users, and the environment, and also be screened against hazardous waste thresholds to determine soil management options.</p> <p>Representative exposed shallow soils shall be collected from:</p> <ul style="list-style-type: none"> ▪ All excavation/proposed grading areas, and analyzed for arsenic and OCPs. ▪ Within 30 feet of the edge of SR 242; analyzed for the total lead and soluble lead. Sampling of ADL should be performed in accordance with the requirements of the Caltrans/ DTSC ADL Variance, if necessary. ▪ Within the unpaved parking lot at 1490 Franquette Avenue; analyzed for petroleum hydrocarbons. ▪ Drainage swales and sediments in catch basins; analyzed for Title 22 metals. <p>Measure HAZ-2: As part of the PSI (see Measure HAZ-1), hazardous building materials surveys shall be conducted by a qualified professional for structures proposed for renovation and/or demolition as part of the project. Lead-based paint and asbestos-containing material shall be included in the hazardous materials building surveys. All loose and</p>

Affected Resource	Potential Effect			Avoidance and Minimization Measures
	No-Build Alternative	Build Alternative 1	Build Alternative 2	
		(ADL) and other heavy metals.		<p>peeling lead-based paint and asbestos-containing material shall be removed by a certified contractor(s) in accordance with local, State, and federal requirements. All hazardous materials shall be removed from structures in accordance with California OSHA regulations.</p> <p>Measure HAZ-3: Yellow thermoplastic and yellow paint striping and markings on existing roadways shall either be analyzed for lead chromate prior to disturbance/removal in accordance with Chapter 7 of the Caltrans Construction Manual or managed as an assumed hazardous waste by implementing a Lead Compliance Plan and testing the residues for hazardous waste classification prior to off-site disposal in accordance with Caltrans' Standard Special Provision 14-11.07.</p> <p>Measure HAZ-4: Asphalt-concrete and Portland cement concrete grindings shall be reused in accordance with San Francisco Bay Regional Water Quality Control Board's guidelines for Caltrans' projects or transported offsite for recycling or disposal.</p> <p>Measure HAZ-5: Construction along the Project corridor shall be conducted under a project-specific Construction Risk Management Plan (CRMP) to protect construction workers, the general public, and the environment from hazardous materials identified in the PSI (see Measures HAZ-1 and HAZ-2). The CRMP shall incorporate the soil and groundwater analytical data from the PSI to ensure that soil and groundwater are stored, managed, and disposed of in a manner protective of human health and the environment, and in accordance with applicable laws and regulations.</p> <p>To address potential residual groundwater contamination concerns along the entire project limits, the CRMP shall require all groundwater from dewatering of excavations, if any, to be stored in tank(s) during construction activities and characterized prior to disposal or recycling. This would be in addition to the pre-characterization of groundwater quality during the PSI.</p> <p>The CRMP shall address the possibility of encountering undocumented sources of contamination in the subsurface by including the following measures for identifying, testing, and managing soil and groundwater suspected of containing hazardous materials that have not previously</p>

Affected Resource	Potential Effect			Avoidance and Minimization Measures
	No-Build Alternative	Build Alternative 1	Build Alternative 2	
				<p>been identified at the site: (1) provide procedures for discovering, evaluating, handling, storing, testing, and disposing of soil and groundwater during project excavation and dewatering activities, respectively; (2) describe required worker health and safety provisions for all workers potentially exposed to hazardous materials in accordance with state and federal worker safety regulations; and (3) designate personnel responsible for implementation of the CRMP.</p> <p>The CRMP shall incorporate procedures for sampling, analyzing, and managing traffic striping and pavement markings and asphalt-concrete and Portland cement concrete grindings (see Measure HAZ-3).</p>
Air Quality (2.2.6)	None	Regional and project-level conformity achieved. No considerable net increase of any criteria pollutant. Construction activities associated with the project would be relatively short in duration and intensity and would result in temporary increases in daily emissions.	Same as Build Alternative 1	<p>Measure AIR-1: The project will follow Caltrans' Standard Specification Sections 14-9.01 and 14-9.03, which addresses the requirements of the local air pollution control district (BAAQMD) and dust control and dust palliative application, respectively.</p> <p>Measure AIR-2: The project will implement all feasible PM10 control measures required by the BAAQMD. The BAAQMD CEQA Guidelines provide feasible control measures for construction emissions, which will be finalized with the special provisions developed during final design phase. Measures to reduce PM10, PM2.5, and DPM from construction are recommended to ensure that short-term health impacts to nearby sensitive receptors are avoided.</p>
Noise (2.2.7)	None	There would be no substantial increase in permanent noise levels. Construction	Same as Build Alternative 1	<p>Measure NOI-1: To reduce the potential for noise impacts resulting from construction activities, the following measures would be implemented during construction:</p> <ul style="list-style-type: none"> Noise-generating construction activities should be restricted to between 7:30 AM and 6:00 PM, weekdays (except on holidays), where feasible.

Affected Resource	Potential Effect			Avoidance and Minimization Measures
	No-Build Alternative	Build Alternative 1	Build Alternative 2	
		activities associated with the project would be relatively short in duration and intensity, and would potentially result in temporary increases in noise levels.		<ul style="list-style-type: none"> ■ All construction equipment should conform to Section 14-8.02, Noise Control, of the latest Standard Specifications. ■ Pile driving activities should be limited to during the off-peak commute hours of the daytime (from 9am to 3pm). ■ Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment. ■ Locate stationary noise generating equipment at least 100 feet from sensitive receptors when sensitive receptors adjoin or are near a construction project area, or shield receptors from stationary noise generating sources with noise barriers or acoustical enclosures. ■ Unnecessary idling (i.e., greater than 5 minutes in duration) of internal combustion engines within 100 feet of residences should be prohibited, where feasible. ■ Utilize "quiet" air compressors and other "quiet" equipment where such technology exists. ■ Avoid staging of construction equipment or vehicles within 200 feet of residences. ■ The contractor should prepare a detailed construction plan identifying the schedule for major noise-generating construction activities and distribute this plan to adjacent noise-sensitive receptors. The construction plan should also list the construction noise reduction measures identified in this study.
Biological Resources (2.3.1-2.3.6)	None	There will be no impact to sensitive habitats. Removal of trees during nesting season could reduce nesting habitat for	Same as Build Alternative 1	Measure BIO-1: For most bird species in the vicinity, the non-breeding season is September 1 through January 31. If vegetation removal outside of these dates is necessary, a qualified wildlife biologist will conduct a preconstruction survey within 72 hours of construction and/or vegetation removal to locate any nesting birds. If any active nests are discovered, the USFWS/CDFW will be contacted to determine protective measures required to avoid take. These measures could include fencing off an area where a nest occurs, or shifting construction work temporally or spatially away from the nesting birds.

Affected Resource	Potential Effect			Avoidance and Minimization Measures
	No-Build Alternative	Build Alternative 1	Build Alternative 2	
		<p>migratory birds.</p> <p>Potential indirect impacts (1.479 acres) to water quality of Pine Creek due to construction activities.</p> <p>There will be no impact to special-status, endangered, or threatened species.</p>		<p>Qualified biologists may be required to monitor construction every day while protected migratory birds are in the BSA and/or nesting there. If an active nest is found after the completion of the pre-construction surveys and after construction begins, all construction activities will stop until a qualified biologist has evaluated the nest and erected the appropriate buffer around the nest (300 feet from active raptor nests or 50 feet from active passerine¹ nests). If establishment of the buffer is not feasible, USFWS/CDFW will be contacted for further avoidance and minimization guidelines.</p> <p>Measure BIO-2: During construction, suitable exclusion devices, such as appropriately sized netting, would need to be installed before February 1 of each construction year. These exclusion structures would be left in place, monitored by qualified biologists every day, and maintained through August 31 of each breeding season, or until work is complete.</p> <p>Measure BIO-3: In compliance with the Executive Order on Invasive Species, Executive Order (EO 13112), and guidance from the FHWA, the landscaping and erosion control included in the project will not use species listed as invasive.</p> <p>All areas that are temporarily affected during construction will be revegetated with an assemblage of native grass, shrub, and tree species to restore habitat values. Invasive, exotic plants will be controlled within the BSA to the maximum extent practicable pursuant to EO 13112.</p>

¹ A passerine nest includes birds from the order Passeriformes, comprising more than half of all birds. Passerine birds are typically considered to be perching birds.